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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,426

12/27/2005

Francesco Ciardelli

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EXAMINER

ASINOVSKY, OLGA

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

08/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,426	Applicant(s) CIARDELLI ET AL.	
	Examiner OLGA ASINOVSKY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/27/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The cancellation of claims 1-26 on 12/27/2005 is noted.

Claim Rejections - 35 USC § 112

1. Claims 27 and 29 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 27 line 7, it has been held that recitation that of “is able” performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Suggestion to substitute with –reacts–

With regard to claim 29 line 2, the term “possibly” should be removed, because it is not positive statement (see remark for claim 27 above).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 27-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romani et al U.S. Patent 6,506,863 or Braga et al U.S. Patent 5,712,323 each in view of Hendewerk U.S. Patent 5,001,197.

Art Unit: 1796

Romani et al invention belongs to the patent family to EP 1 216 999 cited by applicants with IDS. The subject matter is the same.

Romani discloses a process of crosslinking polypropylene by an ester of formula (I) in the presence of a free-radical initiator, column 1, lines 5-66; column 2, lines 51-67. The polyolefins, column 2, lines 58-67, are readable in **the present claims 27, 35, 40**. The formula (I) is furfuryl derivative including polyol esters of 3-(2-furyl)-2-propenoic acid, that is readable in the **present claims 27, 28, 29, 30, 31, 32, 33, 40**. The claimed polyolefin, furfuryl derivatives and an initiator are readable in Romani invention. Romani calls the furfuryl derivatives as crosslinking agents. The furfuryl compound represented by the formula (I), column 1, line 50 is readable in the **present claims 27, 29 30, 33 and 40**. The free radical initiator such as dicumyle peroxide or diacyl peroxide, column 3, lines 45-47, is readable in **the present claims 27, 37, 38**. The crosslinking agent is used in an amount of from 0.01 to 8 parts by weight, column 3, lines 30-34, for the **present claim 39, 40**. The free radical initiator has a decomposition half-life of 10 to 200 seconds in the temperature range of 100 to 240 C, column 3, lines 40-43, for the **present claim 36**. The amount of the initiator is in the range of from 0.1 to 10 % by weight, column 3, line 36, for the **present claim 39**. The crosslinking process is carried out at a temperature of from 140 to 240 C, column 3, line 64, for the **present claims 36 and 49**. The crosslinking process is at high temperature and high speed agitation, column 5, lines 35-36, that is readable in **the present claims 43-50**.

Romani does not disclose the addition of “at least one unsaturated compound which is chosen from (meth)acrylic compounds, maleic anhydride, derivatives ester of maleic anhydride, and their mixture” in the present claims 27 and 40.

Braga discloses crosslinked polypropylene in the presence of organic peroxides and crosslinking coagent. The crosslinking coagents represented by formula (I) at column 4, lines 45-67 are readable in the **present claims 30, 33, 40**. Crosslinking agent is peroxide compound.

Braga does not disclose the addition of “at least one unsaturated compound which is chosen from acrylic and methacrylic compounds, maleic anhydride, derivatives ester of maleic anhydride, and their mixture” in the present claims 27 and 40.

Hendewerk discloses polypropylene composition produced by a process for the maleation of a polypropylene with maleic anhydride in the presence of a free radical initiator, column 1, lines 48-64; column 2, lines 13-20, 30-32, 4665-68. Hendewerk discloses that the peroxide initiator having high temperature decomposition will produce a maleated polypropylene product having reduced molecular weight because degradation occurs with peroxide initiators, column 9, lines 52-54. To eliminate of molecular weight breakdown some crosslinking occurs in the presence of a peroxide in a copolymer containing other olefins such as ethylene. This crosslinking phenomenon is well known in the art, column 11, lines 43-47. The crosslinking affect achieved with the presence of ethylene monomeric units, column 13, lines 38-40.

Each reference discloses crosslinking process for polyolefins.

It would have been obvious to one of ordinary skill in the art to modify a process for crosslinking polyolefin in the presence of furfuryl compound in Romani invention or Braga invention by employing a maleated polypropylene by teaching in Hendewerk for the purposes to eliminate the molecular weight breakdown of the polyolefin with a crosslinking agent in Romani invention or Braga.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References have been considered. The closest reference to EP 1 216 999 belongs to the patent family to U.S. Patent 6,506,863, which has been discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLGA ASINOVSKY whose telephone number is (571)272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O.A.

Olga Asinovsky
Examiner
Art Unit 1796

July 25, 2008

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796